

# Custom 3-D Milled Object with Vacuum-Molded 2-D Printout Created from a 3-D Camera

## Abstract

A 3D copy of a 3D subject is made by combining a 3D custom milled shape and a 2D printed 2D image sheet molded to the contours of the 3D custom milled shape. A 3D camera captures 3D details of the 3D subject and also captures a multi-color 2D image of the 3D subject. The 3D camera outputs a geometry file to a CNC milling machine that cuts a milling blank to make a custom milled shape. The 3D camera also outputs a 2D image file to a personal computer that prints the 2D image onto a plastic sheet. The custom milled shape is placed as a mold on a vacuum-forming machine. The plastic sheet is aligned to the custom milled shape and heat and vacuum pressure applied. The 2D image is molded into the 3D shape of the custom milled shape.